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**Christopher K.R.T. Jones\*** ([ckrtj@email.unc.edu](mailto:ckrtj@email.unc.edu)), Department of Mathematics, Phillips Hall, University of North Carolina, Chapel Hill, NC 27599-3250. *Lagrangian Data Assimilation as a Paradigm in Climate*. Preliminary report.

Assimilating Lagrangian data into ocean models has proved very successful. Its importance derives from the fact that most subsurface observations are made by instruments that are carried by the flow itself. Its mathematical structure, however, is very suggestive for climate problems generally. It separates the system state in various ways: fast/slow; high/low-dimensional; relatively tame/chaotic; linearizable/highly nonlinear. Its success will be outlined and explained as well as the possibility of its being a paradigm discussed. (Received September 25, 2012)